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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,857	01/30/2002	Takahiro Kato	041465-5134	3634
9629	7590	03/18/2004	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2652	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,857

Applicant(s)

KATO ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 5,6,11-13 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

2nd Non-Final Rejection

Election/Restrictions

1. Applicant's election of Species I, claims 1-4,7-10, 14 and 15 in Paper No. 6, filed on 01/05/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kamioka et al (US 5,535,076).

With regard to claim 1, Kamioka et al shows a supporting mechanism in Fig.8(a) for movably supporting a member 33 (Fig. 6) to be supported along a supporting shaft 32, including: a plurality of supporting members 39a and 39b provided on the member to be supported, each of the supporting members contacting with the supporting shaft on two contact points (Fig. 8a) so as to be movable supporting shaft, the at least two contact points being apart from each other; and a pressing device 52 (Column 7, lines 34-35) for pressing the plurality of supporting members against the supporting shaft so that the contact points of each supporting member simultaneously come into contact with the supporting shaft.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igawa et al (JP 10-74370 A) in view of Hasegawa (5,546,252).

With regard to claim 1, Igawa et al shows a supporting mechanism in Figs. 20-27 for movably supporting a member 4 to be supported along a supporting shaft 8, including: a plurality of supporting members (Fig. 27, the two support tabs to support the shaft) provided on the member 4 (Fig. 20) to be supported, and a pressing device 13 for pressing the plurality of supporting members against the supporting shaft.

Igawa et al does not show that each of the supporting members contacting with the supporting shaft on at least two contact points, at least two contact points being apart from each other so as to be movable on the supporting shaft.

Hasegawa shows a supporting mechanism in Fig. 3, wherein each of the supporting members - bearings 15a and 15b contacting with the supporting shaft 10 on at least two contact points, the at least two contact points being apart from each other so as to be movable on the supporting shaft.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to use the two support members taught by Hasegawa into Igawa et al's device. The rationale is as follows: Igawa et al teaches the support members but is silent on the structure of the support member. Hasegawa teaches that

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using bearing 15a and 15b as the support member would be able to hold the shaft with high degree of accuracy so that no torque is induced, thereby it is possible to reduce noise (Column 6, lines 52-56). One of ordinary skill in the art would have been motivated to use the bearings to obtain higher degree of accuracy and reduce noise.

With regard to claim 2, Hasegawa further shows that the supporting member has two contact surfaces, which include the contact points, respectively and are in parallel with the supporting shaft, and the pressing device comes into contact with the supporting shaft at a position existing between the supporting members in a parallel direction with the supporting shaft to press the supporting shaft.

With regard to claims 3 and 4, Igawa et al Hasegawa further shows that the supporting shaft 8 has an outer circumferential surface on which a threaded portion is formed to move the member to be supported, and the pressing device 13 is fixed to the member to be supported and includes a rack gear engaging with the threaded portion so as to move the member along the supporting shaft.

With regard to claim 7, Hasegawa further shows that the at least two contact points are apart from each other in a circumferential direction of the supporting shaft.

With regard to claim 8, the above constructed device includes a feeding unit including: (a) a supporting mechanism for movably supporting a member to be supported along a supporting shaft, including: a plurality of supporting members provided on the member, each of the supporting members contacting with the supporting shaft on at least two contact points so as to be movable on the supporting shaft, the at least two contact points being apart from each other, the supporting shaft having an outer circumferential surface on which a threaded portion is formed to move the member to be supported; and a pressing device for pressing the plurality of

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supporting members against the supporting shaft so that the contact points of each supporting member simultaneously come into contact with the supporting shaft and the plurality of supporting members simultaneously come into contact with the supporting shaft, the pressing device being fixed to the member to be supported and includes a rack gear engaging with the threaded portion so as to move the member along the supporting shaft; and (b) a rotation device 9 (English translation, [0009] line 13) for rotating the threaded portion engaging with the rack gear, thereby moving the member to be supported along the supporting shaft.

With regard to claim 9, in above constructed device, the supporting member has two contact surfaces, which include the contact points, respectively and are in parallel with the supporting shaft, and the pressing device comes into contact with the supporting shaft at a position existing between the supporting members in a parallel direction with the supporting shaft to press the supporting shaft.

With regard to claim 10, Hasegawa further shows that the at least two contact points are apart from each other in a circumferential direction of the supporting shaft.

Allowable Subject Matter

4. Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

- With regard to claims 14 and 15, as the closest reference, the combination of Igawa (JP 10-74370 A) and Hasegawa (US 5,546,252) shows a supporting mechanism having supporting members, **but fails to show** that each of the supporting members is opened in a radius direction of the supporting shaft,

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enabling the supporting shaft to shift in the radius direction thereof to be received in the supporting member.

- Applicant asserts that in such a configuration, it is unnecessary to form the whole bodies of the supporting members with a high procession, which helps to reduce manufacturing cost of the feeding unit itself (Specification, p. 5, lines 25-27).

Conclusion

5. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Response to Arguments

6. Applicant's arguments with respect to claims 1 and 8 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, appearing to read "Chen Tianjie".

Tianjie Chen
Primary Examiner
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03/15/2004